Welcome from BSGP Leadership

Thank you for your interest in the Biomedical Sciences Graduate Program at The Ohio State University Wexner Medical Center.

Our goal is to train talented, predoctoral students in interdisciplinary approaches to biomedical research to think critically and acquire the proficiencies needed for future success in the rapidly evolving fields within biomedical sciences. Designed to allow graduate students to build a solid foundation for their professional lives as interdisciplinary researchers, the BSGP curriculum maintains high standards of intellectual rigor, fosters creativity and passion for research and provides research opportunities, with selected faculty, that cross traditional disciplinary boundaries.

Ohio State is one of America’s largest and most comprehensive universities, and if your research takes you in unexpected directions, we have the faculty to mentor you to become part of the biomedical scientist workforce, and to make meaningful scientific discoveries. We welcome students of diverse scientific backgrounds who have the ambition to excel in biomedical research, in both basic and translational sciences.

About the Program

The central theme of the Biomedical Sciences Graduate Program is “The Biology of Human Disease.” The mission of the program is to improve health care through innovation in research based on an understanding of how multiple organ systems and physiological processes function.

We offer predoctoral trainees a curriculum that maintains high standards for intellectual rigor and creativity, with access to research opportunities that cross traditional disciplinary barriers. The program is supported by a grant, from the National Institute of General Medical Sciences at the National Institutes of Health, to provide training in Systems and Integrative Biology.

Program Highlights

- Broad-based, interdisciplinary curriculum
- Integrative, disease-based approach in basic and translational research
- Early lab experience working alongside Ohio State research scientists
- Ten Areas of Research Emphasis
- Top-ranked medical school in a nationally-recognized academic medical center
- iPads used in coursework
- Annual student retreat with travel award competition

Joanna Groden, PhD
Vice Dean for Research; Professor, Department of Molecular Virology, Immunology and Medical Genetics; and Co-Director, Biomedical Sciences Graduate Program

Jeffrey Parvin, MD, PhD
Associate Dean for Graduate Studies; holder of the Louis Levy Professorship for Cancer, Department of Biomedical Informatics; and Co-Director, Biomedical Sciences Graduate Program

Amy Lahmers
Director, Biomedical Sciences Graduate Program

Program Statistics

Students admitted annually: 20-30
Average GPA: 3.63
Average GRE: 75th percentile
Total enrollment: 140
Female: 70
Male: 70
Underrepresented: 20
Intramural fellowship awards: 22
Extramural fellowship awards: 21
Student peer-reviewed publications: 99
The Curriculum

The Biomedical Sciences Graduate Program curriculum is efficient, rigorous and balanced, and is designed to provide both breadth and depth of high quality training to prepare graduates for successful careers in biomedical research. In addition to the core courses provided in the first and second years, and in agreement with their chosen advisor, students also complete coursework associated with a specific area of research emphasis that enhances their depth of understanding in a specific research area.

Areas of Research Emphasis

Although the Biomedical Sciences Graduate Program is an interdisciplinary program and promotes collaborative interactions, each student needs also to develop a strong core of expertise within an established area of research. Therefore, during the second year, students begin to focus their studies on one or more of several established “Areas of Research Emphasis” in which the student must complete specific curricular requirements in order to request transcript designation.

The ten areas of research emphasis are:

- Biology of Neurological Disorders
- Cancer Biology
- Cellular and Molecular Physiology
- Computational Biology and Bioinformatics
- Experimental Therapeutics
- Genetics
- Immunology
- Microbial Pathogenesis
- Molecular Basis of Disease
- Translational Research

Curriculum

Year One

Laboratory research training begins during the first semester. Students will begin one of three laboratory rotations in one or more research areas of their choosing, and take courses in biomedical sciences concepts, professional and ethical issues in biomedical science, research techniques and resources, research problem solving, and professional development.

Year Two

Students choose a dissertation advisor and an area of research emphasis. Students will begin coursework in their areas of emphasis, for which they will receive transcript designation, and courses in biomedical informatics and the essential aspects of grant writing and professional development.

Year Three and Subsequent Years

After successful completion of the candidacy examination, students will work primarily on their research projects, take elective courses in their area of research emphasis and attend research seminars, research-in-progress seminars, laboratory meetings and professional development meetings.

The following opportunities are available to afford our students, as participants in the Biomedical Sciences Graduate Program, with exposure to topics related to human health, physiology, disease and research:

- A core concepts course that covers topics relevant to the mechanisms of human disease and emphasizes a systems-integrated perspective on human disease.
- A research problem-solving course that allows trainees to dissect, discuss and critique a journal paper relevant to the core course topics.
- A formal course in the responsible and ethical conduct of research.
- Two courses in the essential aspects of grant writing, using the student’s own thesis proposal.
Where Research Meets Practice

Ohio State University research scientists are at the forefront of translating basic science into clinical applications. The hallmark of scientific and biomedical research at The Ohio State University Wexner Medical Center is the integration of diverse disciplines to solve our most challenging healthcare problems.

 Ranked among the best hospitals in the nation, Ohio State’s Wexner Medical Center is a comprehensive medical facility with a three-part mission of research, teaching and patient care. Its facilities include Ohio State’s College of Medicine, six hospitals, two free-standing research institutes and a network of more than a dozen community-based primary and specialty care facilities throughout central Ohio.

The Ohio State University Wexner Medical Center offers more than 20 core research laboratories for shared use by health sciences investigators. Clinical research faculty, basic scientists and students all benefit from the shared cost of these resources, and the research environment at Ohio State benefits from the economies of scale that enable timely acquisition of new instrumentation and technologies.

Research Excellence

- Ohio State’s Wexner Medical Center investigators hold more than $185 million in internal and external research funding—a symbol of our mission of creating the future of medicine to improve people’s lives.

- Ohio State’s Wexner Medical Center houses or co-manages more than 20 research centers and institutes and 25 core research laboratories.

- The Ohio State University Biomedical Research Tower, a 10-story, 403,000 square-foot building designed specifically for research, houses internationally recognized research programs in cancer and cancer genetics, cardiovascular and lung disease and high-field imaging, bringing national and international prominence to Ohio State’s biology, biotechnology and biomedical informatics programs.

Learn more about research opportunities at The Ohio State University Wexner Medical Center:

medicalcenter.osu.edu/research